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REMARKS/ARGUMENTS

Rejection of Claims 1 and 5-6 Under 35 U.S.C. §102(e)

Claims 1 and 5-6 are rejected under 35 U.S.C. §102(e) as being anticipated by Lee et al. (US 6,136,687). In the rejected claims, Claim 1 is independent.

Applicants respectfully traverse with Examiner's rejection on the basis that the teaching of Lee et al. does not disclose every element of the claimed invention. According to MPEP §2131, To Anticipate A Claim, The Reference Must Teach Every Element Of The Claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

The elements which Lee et al. fail to show include the steps of forming an inter-metal dielectric layer over the substrate having the interconnect lines formed thereon to form at least an air gap in a spacing between the adjacent interconnect lines and below top surface of the pad oxide layer and planarizing the inter-metal dielectric layer without opening the air gap.

Particularly, Lee et al. disclose forming a poor step coverage layer 18 over the conductors 14a-14n and the capping members 16a-16n to form air gap 21 over the top surface of the capping members 16a-16n, and open space 23 which is contrary and different to the claimed invention. Moreover, Lee et al. disclose etching back the poor step coverage layer 18 to open up the air gap 21 which is also contrary and different to the claimed invention. According to MPEP §2131, "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

It is therefore that the teaching of Lee et al. does not disclose every element of the claimed invention. According to MPEP §2131, Lee et al. actually fail to render the

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claimed invention unpatentable.

Rejection of Claims 2, 3, 4, 7 and 8 Under 35 U.S.C. §103(a)

Claims 3 and 8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lee et al. (US 6,136,687) .

Applicants respectfully traverse with Examiner's rejection since Lee et al. do not disclose every element of the claimed invention according to the above-mentioned reasons. According to MPEP §2143.03, To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Moreover, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). It is therefore that Claims 3 and 8 are patentable over Lee et al.

Claim 2 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lee et al. in view of Kim et al. (US 6,399,476 B2) .

Although Kim et al. may teach the metal layer is formed from the group consisting of Al, the combination of Lee et al. and Kim et al. is still insufficient to render claim 2 unpatentable since the combination of Lee et al. and Kim et al. is insufficient to render claim 1 unpatentable under 35 U.S.C. 103.

Claims 4 and 7 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lee et al. in view of Lin (U.S. 6,211,057 B1).

Applicants respectfully traverse with Examiner's rejection since the teaching of Lin et al. does not disclose the element which Lee et al. fail to disclose. That is, the combination of Lee et al. and Lin et al. fails to teach every element of the claimed invention. Lin et al. actually fail to teach forming an inter-metal dielectric layer over

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the substrate having the interconnect lines formed thereon to form at least an air gap in a spacing between the adjacent interconnect lines and below top surface of the pad oxide layer and planarizing the inter-metal dielectric layer without opening the air gap. Therefore, the combination of Lee et al. and Lin et al. fails to teach every element of the claimed invention. According to MPEP §2143.03, since claim 1 is nonobvious under 35 U.S.C. 103, then Claims 4 and 7 depending therefrom is nonobvious. It is therefore that Claims 4 and 7 are patentable over the combination of Lee et al. and Lin et al.

Conclusion

In light of the above remarks to the claims, Applicants contend that claimed invention is patentable thereover. Pending claims are now in condition for favorable consideration and allowance of Claims are most respectfully requested.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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